LATINOS IN MASSACHUSETTS: HOW PUBLIC HEALTH SERVICES MEET THEIR NEEDS[1]

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INTRODUCTION

Halfway into the next century, Latinos will become the largest ethnic minority group in the United States. As health researchers and policymakers have turned their attention to this fast-growing population, they have encountered serious obstacles in obtaining basic health data (CDC, 1999). It has not been until recently that the issue of health disparities among ethnic/racial groups has become the focus of attention among policymakers. Although comparative health research has mostly focused on Whites and African Americans, there is a significant lack of information about health related issues affecting Latinos. For example, appropriate goals for Latinos could not be developed for many of the Healthy People 2000 public health issues because of lack of essential baseline information (Public Health Service, 1991).

In Massachusetts, Latinos constitute the largest ethnic minority group. They are a young population disproportionately affected by poverty. By virtue of their socioeconomic profile, Latinos are the largest group of minority consumers of Medicaid services. This study examined data from Massachusetts' Medicaid records selected to provide information based on the Health Plan Employer Data & Information Set (HEDIS) measures. The purpose of this examination was to determine how Latino consumers of Medicaid services compare to Blacks, Whites, and Asians in terms of benchmark indicators for prenatal care, cervical and breast cancer screening, immunizations, and adult preventative care as well as language issues and level of satisfaction with healthcare services. HEDIS is one of several national efforts, directed by the National Committee for Quality Assurance (NCQA), to standardize the measurement and reporting of the performance of health plans and managed care organizations.

METHODOLOGY

Secondary analyses of data collected by the Massachusetts Division of Medical Assistance (DMA) were conducted to answer the following two questions:

1. How do Latino Medicaid consumers compare to their Black, White, and Asian counterparts in terms of prenatal care, cervical and breast cancer screenings, immunizations, and adult preventative care?

2. To what extent are Latinos satisfied with the quality of health care they receive as beneficiaries of Medicaid in comparison with other ethnic/racial groups?

DMA HEDIS databases drew information from either the administrative (claims) database or from chart review random samples of N=411 enrollees. Data from administrative database were

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combined with medical chart review data. The data analyzed covered the period from 1996 to 1998. Logistic regressions with "Whites" as the referent group were conducted to examine differences among ethnic/racial groups. Tables below show odds ratios (OR) with 95% confidence intervals (CI) which serve as a statistical test (alpha = .05).

FINDINGS

- There were no significant differences across groups regarding the occurrence of a first prenatal visit during the first trimester of pregnancy or completing at least 80% of the expected number of prenatal visits (See Tables 1 and 2).
- There were no differences across groups in cervical cancer screenings (See table 3).
- Latinas had a significantly higher number of breast cancer screenings (i.e., mammograms) as compared to Whites (See Table 4).
- There were no statistically significant differences in the percent of children who met Combo 1 (i.e., 4 diphtheria, tetanus, pertussis DTP/DTaP, 3 polio (OPV/IPV), 1 measles, mumps, rubella, 2 hepatitis B, 1 Hib) or Combo 2 (Combo 1 plus additional Hib) vaccination criterion compared to Whites (see Table 5a).
- Latino children had a significantly lower levels of up-to-dateness with regard to Combo 3 vaccinations (i.e., 4 diphtheria, tetanus, pertussis DTP/DTaP, 3 polio (OPV/IPV), 1 measles, mumps, rubella, 2 hepatitis B, 2 Hib, and 1 varicella) than Whites (See Table 5b).
- Latinos reported higher levels of satisfaction with the health care they received from all doctors and health care providers than any other group. Asians reported the lowest level of satisfaction (See Table 6).
- Latinos, Blacks, and Whites showed a tendency to be equally satisfied with their personal doctor or nurse, whereas Asians reported to be less satisfied (See Table 7).
- As a trend, Latinos and Asians tended to report more language issues and need for interpreter services during health care encounters than any other group (See Table 8).
- Latinos, Blacks, and Asians had significantly fewer adult preventative care visits than Whites (See Table 9).
- Latinos with a “very good” self-rated health status appraised their healthcare services as amongst the best more frequently than any other group (See Chart).

CONCLUSIONS

Latino Medicaid consumers compared favorably to Whites in most health service indicators (i.e., first prenatal visit during first trimester; at least 80% of expected prenatal care visits; cervical cancer screening, and Combo 1 and 2 immunizations). Latinas received significantly higher numbers of breast cancer screenings than Whites. Finally, Latinos lagged behind Whites in terms of completion of Combo 3 immunizations, and adult preventative health care visits.

These preliminary findings suggest that the Commonwealth of Massachusetts is efficiently delivering most of the health care services reviewed in this study comparably across all ethnic/racial groups. The areas showing intergroup differences (i.e., immunizations and adult preventative health care services) are ones that the public health literature has shown to have a

long history of difficulties in being effectively delivered. It is important to note that the findings regarding Combo 3 immunizations might have been affected by factors such as sample size and the fact that the varicella shot was recently added to the list of vaccines required under Combo 3, and thus might have not been widely administered at the time the data were collected (i.e., year 1997). Moreover, Massachusetts Department of Public Health did not require the varicella shot by 1997.

As mentioned earlier, immunizations have a long history of being difficult to administer. For example, some have suggested that physicians need to be monitored more closely and provided with incentives and educational programs so that higher rate of immunizations can be reached (Fairbrother, Hanson, Friedman, & Butts, 1999; Zimmerman et al., 1997). Others stress the importance of implementing innovative outreach efforts to increase the number of children with up-to-date immunizations (Browngoehl et al., 1997; Rodewald et al., 1999).

The fact that Latinas had a higher number of mammograms might indicate that their doctors are either adhering to screening guidelines or are prescribing them as a diagnostic tool in situations where cancer or other abnormalities are suspected. The database used in this study does not provide the necessary information to make a distinction between these two possibilities. With regards to the significantly lower number of adult preventative health care visits among Latinos, this is an area that also needs further exploration.

As previously mentioned, the Medicaid health care delivery system put in place in Massachusetts appears to be delivering comparable services to its ethnic/racial constituency. Both the continued monitoring of services delivery and subsequent data analyses across ethnic/racial lines are crucial to ensure quality of care for all Medicaid enrollees (Landon, Tobias, & Epstein, 1998), and to further understand how cultural and socioeconomic factors influence in the healthcare delivery setting.

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• There were no significant differences across groups for the occurrence of a first prenatal visit during the first trimester of pregnancy.

Table 1. Comparison of prenatal health care among ethnic groups for MassHealth women reporting a live birth in 1996: First prenatal visit during first trimester (N=408) [1].

Ethnicity	N	%	Odds Ratio (95% CI)
White	203	52	1.0 (Referent)
Black	53	45	0.8 (0.42, 1.42)
Latina	90	56	1.2 (0.71, 1.93)
Asian	24	67	1.9 (0.79, 4.78)
Other	38	66	1.8 (0.89, 3.8)

Note: ORs did not statistically differ from 1.0 (alpha=0.05).

[1] Percentage of women who delivered a live birth during reporting year, were continuously enrolled for 44 weeks prior to delivery and who had a prenatal care visit 26-44 weeks prior to delivery (to include 1st trimester for women who deliver post-term).

• There were no significant differences across groups for the completion of at least 81% of the expected number of prenatal visits.

Table 2. Comparison of prenatal health care among ethnic groups for MassHealth women reporting a live birth in 1996: Ongoing health care frequency—Proportion of women with at least 81 % of their expected prenatal visits (N=304) [1].

Ethnicity	N	%	Odds Ratio (95% CI)
White	144	72	1.0 (Referent)
Black	37	57	0.5 (0.25, 1.11)
Latina	63	76	1.3 (0.65,2.58)
Asian	14	79	1.5 (0.43,6.69)
Other	46	85	2.2 (0.97, 5.77)

Note: ORs did not statistically differ from 1.0 (alpha=0.05).

[1] Percentage of pregnant women with live births during reporting year who received <21%, 21-40%, 41-60%, 61-80%, or >=81% of expected number of prenatal care visits, adjusted for gestational age and month prenatal care began. (Gestational age at birth: weeks between 1st day of LMP and delivery, rounded to lower whole number; ascertained through MD exam, ultrasound, or calculation; Expected visits determined by ACOG: every 4 wks for first 28 wks, every 2-3 weeks until 36 weeks gestation, weekly thereafter)

• There were no differences across groups in cervical cancer screenings.

Table 3. Comparison of cervical cancer screening [1] during 1997 among ethnic groups for MassHealth enrollees (N=411).

Ethnicity	N	%	Odds Ratio (95% CI)
White	259	75	1.0 (Referent)
Black	47	77	1.1 (0.54, 2.37)
Latina	49	86	2.0 (0.91, 5.09)
Asian	16	94	5.0 (0.99, 91.71)
Other	40	75	1.0 (0.48, 2.27)

Note: ORs did not statistically differ from 1.0 (alpha=0.05).

[1] Percentage of women age 21 through 64 who were continuously enrolled during reporting year and who received one or more Pap tests during the reporting year or the 2 years prior to the reporting year. May exclude women with hysterectomy and no residual cervix.

• Latinas had a significantly higher number of breast cancer screenings compared to Whites.

Table 4. Comparison of breast cancer screening[1] during 1998 among ethnic groups for MassHealth enrollees (N=13,342).

Ethnicity	N	%	Odds Ratio (95% CI)
White	10,394	36	1.0 (referent)
Black	1,179	37	1.1 (0.94, 1.2)
Latina	651	43	1.4 (1.15,1.59) *
Asian	418	33	0.9 (0.72,1.09)
Other	700	38	1.1 (0.93,1.28)

Note: * indicates the odds ratio is significantly different from 1.0 (alpha=0.05).

[1] Percentage of women age 52 through 65 who were continuously enrolled during reporting year and the preceding year and who had at least one mammogram during the reporting year. May exclude women with radical bilateral mastectomies.

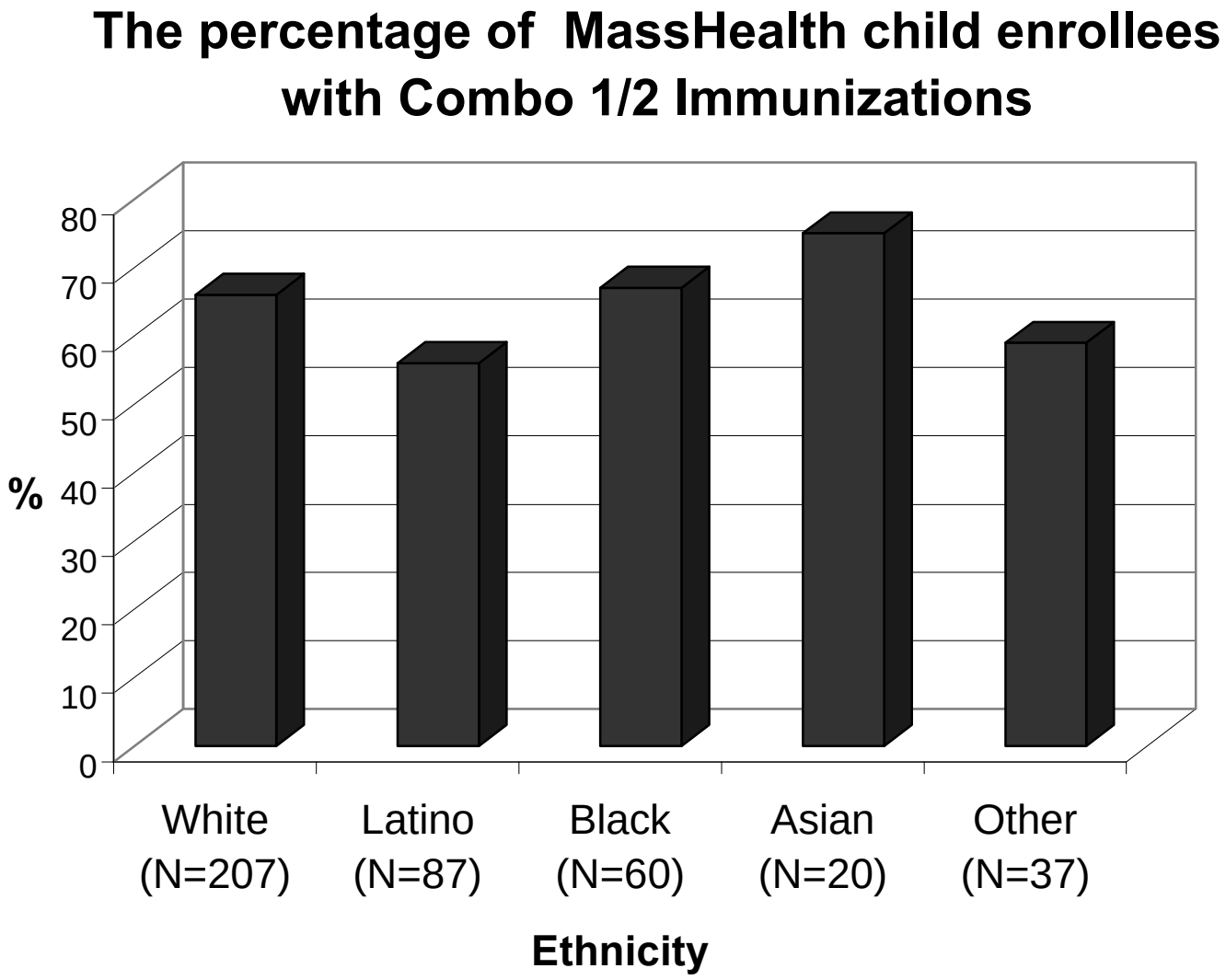
- There were no statistically significant differences in the percent of children who met the Combo 1 or Combo 2 vaccination criterion compared to Whites.

Table 5a. Comparison of child immunization among ethnic groups for MassHealth children enrolled during 1997 (N=411): Combo 1 / 2 [1].

Ethnicity	N	%	Odds Ratio (95% CI)
White	207	66	1.0 (Referent)
Black	60	67	1.0 (0.57, 1.95)
Latino	87	56	0.7 (0.40, 1.13)
Asian	20	75	1.6 (0.58, 4.97)
Other	37	59	0.8 (0.38, 1.59)

Note: ORs did not statistically differ from 1.0 (alpha=0.05).

[1] Combo 1: 4 diphtheria, tetanus, pertussis DTP/DTaP, 3 polio (OPV/IPV), 1 measles, mumps, reubella (MMR; between 1st and 2nd birthdays), 2 hepatitis B, 1 *Hemophilus influenza* B (Hib; between 1st and 2nd birthday). Percentage of enrolled children who had 2nd birthday during reporting year, were continuously enrolled for 12 months immediately preceding 2nd birthday and who had received specified vaccinations on or before 2nd birthday (unless noted above). Excludes immuno-compromised children. Combo 2 = Combo 1 plus additional Hib (at least one of Hib must fall between 1st and 2nd birthday).


The percentage of MassHealth child enrollees with Combo 1/2 Immunizations
%
80
70
60
50
40
30
20
10
0
White (N=207)
Latino (N=87)
Black (N=60)
Asian (N=20)
Other (N=37)
Ethnicity

- Significantly fewer Latino children met the HEDIS Combo 3 vaccination criterion compared to Whites.

Table 5b. Comparison of child immunization among ethnic groups for MassHealth children enrolled during 1997 (N=411): Combo 3[1].

Ethnicity	**N**	%	Odds Ratio (95% CI)
White	207	20	1.0 (Referent)
Black	60	17	0.8 (0.36, 1.68)
Latino	87	9	0.4 (0.17, 0.87) *
Asian	20	15	0.7 (0.16, 2.26)
Other	37	19	0.9 (0.36, 2.2)

Note: * indicates the odds ratio is significantly different from 1.0 (alpha=0.05).

[1] Combo 3: 4 dipththeria, tetanus, pertussis DTP/DTaP, 3 polio (OPV/IPV), 1 measles, mumps, reubella (MMR; between 1st and 2nd birthdays), 2 hepatitis B, 2 *Hemophilus influenza* B (Hib; at least one of Hib must fall between 1st and 2nd birthday), 1 varicella (chickenpox; between 1st and 2nd birthday). Percentage of enrolled children who had 2nd birthday during reporting year, were continuously enrolled for 12 months immediately preceding 2nd birthday and who had received specified vaccinations on or before 2nd birthday (unless noted above). Excludes immuno-compromised children.

Note: Combo 3= Combo 2 plus 1 varicella; Combo 2= Combo 1 plus second Hib. **Varicella was not required by the Massachusetts Department of Public Health for 1997, the year on which these data are based**.

- Latinos reported higher levels of satisfaction with the health care they received from all doctors and health care providers than any other group. Asians reported the lowest level of satisfaction.

Table 6. Rating of health care during last 6 months from all doctors and health care providers.

Population	Ethnic Group	N	Went to MD or clinic at least once[1]	N	Rate[2] as 9-10	Rate[2] as 7-10
Adult	White	531	76%	385	52%	80%
	Latino	221	76%	153	63%	87%
	Black	97	69%	65	51%	85%
	Asian	55	71%	33	36%	67%
	Other	41	73%	29	34%	83%
	Total N	945	709	665	350	543
Child	White	429	84%	353	62%	90%
	Latino	331	75%	233	65%	91%
	Black	156	83%	122	63%	93%
	Asian	52	67%	33	39%	73%
	Other	22	77%	17	82%	94%
	Total N	990	791	758	474	682

Adult: P-value = 0.002 for differences among ethnic groups using Kruskal-Wallis non-parametric analysis of variance. This statistic tests whether the distributions of scores (0-10 scale) differ among ethnic groups, using a shift hypothesis.
Child: P-value < 0.006 for differences among ethnic groups using Kruskal-Wallis non-parametric analysis of variance.

1: In the last 6 months (no counting times you went to an emergency room), how many times did you/your child go for your own care to a doctor's office or clinic?

2: We want to know your rating of all your/ your child's health care in the last 6 months from all doctors and other health providers. Use any number on a scale from 0 to 10 where 0 is the worst health care possible and 10 is the best health care possible. How would you rate all your/your child's health care?

• Latinos, Blacks and Whites showed a tendency to be equally satisfied with their personal doctor or nurse, whereas Asians reported to be less satisfied.

Table 7. Rating of personal doctor or nurse.

Population	Ethnic Group	N	Have personal MD/Nurse[1]	N	Rate[2] as 9-10	Rate [2] as 7-10
Adult	White	556	81%	399	56%	85%
	Latino	252	79%	169	61%	88%
	Black	112	69%	68	65%	87%
	Asian	58	69%	32	38%	75%
	Other	44	77%	28	50%	86%
	Total N	1022	798	696	396	593
Child	White	446	91%	372	69%	92%
	Latino	368	79%	265	74%	93%
	Black	163	84%	122	71%	90%
	Asian	56	52%	26	35%	62%
	Other	26	73%	18	67%	94%
	Total N	1059	883	803	558	733

Adult: P-value = 0.056 for differences among ethnic groups using Kruskal-Wallis non-parametric analysis of variance. This statistic tests whether the distributions of scores (0-10 scale) differ among ethnic groups, using a shift hypothesis.

Child: P-value < 0.001 for differences among ethnic groups using Kruskal-Wallis non-parametric analysis of variance.

1: Do you have one person you think of as your / your child's personal doctor or nurse?
2: We want to know your rating of your/ your child's personal doctor or nurse. Use any number on a scale from 0 to 10 where 0 is the worst personal doctor or nurse possible and 10 is the best personal doctor or nurse possible. How would you rate your/ your child's personal doctor or nurse now?

- As a trend, Latinos and Asians tended to report more language issues and need for interpreter services during health care encounters than any other group.

Table 8. Language issues for adults.

Population	Ethnic Group	N	Have language issues (Usually/ Always) [1]	N	Need Interpreter[2]	N	Get interpreter (Usually/Always)[3]
Adult	White	380	6%	380	3%	9	78%
	Latino	153	15%	152	33%	49	69%
	Black	65	6%	67	2%	0	--
	Asian	35	37%	35	49%	15	80%
	Other	30	7%	30	13%	4	75%
	Total	663	65	664	84	77	56
Child's Parent	White	351	4%	352	2%	6	50%
	Latino	233	15%	234	27%	63	67%
	Black	122	7%	123	3%	4	75%
	Asian	33	18%	33	33%	11	91%
	Other	16	6%	17	0%	0	--
	Total	755	64	759	86	84	58

Adult: 1. In the last 6 months, how often did you have a hard time speaking with or understanding a doctor or other health provider because you spoke different languages?
2. In the last 6 months, did you need an interpreter to help you speak with doctors or other health providers?
3. In the last 6 months when you needed an interpreter to help you speak with doctors or other health providers, how often did you get one?

Child: 1. In the last 6 months, how often did you have a hard time speaking with or understanding your child's doctors or other health providers because you spoke different languages?
2. In the last 6 months, did you need an interpreter to help you speak with your child's doctors or other health providers?
3. In the last 6 months when you needed an interpreter to help you speak with your child's doctors or other health providers, how often did you get one?

• Latinos, Blacks, and Asians had significantly fewer adult preventative care visits than Whites.

Table 9. Comparison of adult preventative health care[1] in 1998 among ethnic groups for MassHealth enrollees (N=20,246) .

Ethnicity	**N**	%	Odds Ratio (95% CI)
White	74,194	77	1.0 (Referent)
Black	13,601	69	0.7 (0.65, 0.70) *
Latino	16,719	71	0.7 (0.69, 0.75) *
Asian	5,183	73	0.8 (0.74, 0.84) *
Other	10,549	75	0.9 (0.83, 0.92) *

Note: * indicates the odds ratio is significantly different from 1.0 (alpha=0.05).

[1]Percentage of enrollees aged 20-64 as of Dec 31, 1998 who have had an ambulatory or preventive-care visit. Members must have been continuously enrolled during the reporting year. Excludes ER visits, inpatient procedures and hospitalizations, mental health, chemical dependency services.

Percentage of MassHealth Adult Enrollees Rating Health Care as 9 or 10 on 0-10 Scale By Ethnicity and Self-rated Health Status